

# SDMS US EPA Region V

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64  
2/7/98  
1099/6

17 February '98

Vince L. Epps  
IDEM  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015

Michael McAteer  
U.S.E.P.A, HSRW-6J  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

**Re: Enviro-Chem Superfund Site  
Monthly Construction Progress Report Number 2  
January 1998**

This Monthly Progress Report has been prepared in accordance with Section XII of the Consent Decree entered September 10, 1991, Number 83419C, U.S.D.C. District of Indiana.

**(1) Actions Taken Toward Achieving Compliance with Decree**

- a. Versar started and completed the erection of the Process Building shell. (100 % Complete)
- b. Versar started and completed the supporting steel structure for the four 150,000-gallon Storage Tanks T-1, T-2, T-3 and T-4. (100 % Complete)
- c. Versar issued the Final Preconstruction Test Drilling Plan on 5 January, then started and completed 12 borings for the Preconstruction Test Drilling in the Southern Concrete Pad Area. Six supplemental borings will be performed in February. (60% Complete)
- d. Versar fabricated and erected the pipe rack and piping between Storage Tanks T-1 and T-2 to allow interfacing with tank liner installation. (100 % Complete)
- e. Versar started the installation of the PVC liner in tank T-1. Versar requested an equivalency demonstration to allow for field seaming of one seam attaching the side-wall liner panel to the bottom panel in each tank, resulting in a better fit for the liner, and therefore, minimizing excessive wear of the liner. Radian indicated that it had no objection, provided that QC steps that they specified relating to the seals are implemented. Versar is implementing the QC procedures specified by Radian (50 % Complete)

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***Monthly Construction Report Number 2, Page 2***

- f. Versar installed a 4,500-gallon water tank to supply water to decontamination trailer showers. (90 % Complete)
- g. Versar brought three 21,000-gallon frac tanks on-site to store water that was subsequently pumped off the surface of the Southern Concrete Pad to the frac tanks. (100 % Complete)
- h. Versar installed a temporary gas heater for the Process Building to warm the Storage Tank liners prior to installation in the tanks. (100 % Complete)
- i. Compaction tests on soil prepared for the Process Building and tanks T-1 through T-4 and concrete strength tests were completed and found to meet or exceed design specifications. (100 % Complete)
- j. Electric company ran permanent 480 volt power to the on-site power pole. (100 % Complete)
- k. Versar's on-site, full time Health & Safety Officer George R. Hartup started on 13 January.
- l. Mike McAteer (U.S.E.P.A.), Tim Harrison (CH2M Hill), and Vince Epps (I.D.E.M.) visited the site on 15 January.
- m. U.S.E.P.A's/CH2M Hill's Construction Inspector, Dan Lynch, started full-time, on-site on 12 January.
- n. Versar issued the Draft Environmental Conditions Report for comments on 8 January. (90 % Complete)
- o. Radian continued weekly conference calls with U.S.EPA, IDEM, Trustees and Versar on January 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup>.

**(2) Validated Results and Other Data**

No validated data was generated during the month. Validated data associated with the Baseline Air Monitoring will be included in the Baseline Air Monitoring Report in February. Other data generated includes:

- a. Attachment 1 includes data from two rounds of sampling and analysis of the standing water on the Southern Concrete Pad.
- b. Attachment 2 includes copies of the test data from compaction tests on soils for the

Process Building and Storage Tanks T-1 through T-4.

**(3) Additional Work Performed**

The work completed this month under Revised Exhibit A includes the steps identified in items (1) a through (1) o above. Photographic documentation can be found in attachment 3.

**(4) Anticipated Activities for Next Month**

- a. Versar will install permanent 480 volt power to the switch gear at the Process Building.
- b. Versar will finish the installation of liners in the four 150,000-gallon Storage Tanks and will complete repairs to the Bankert's scale drain line.
- c. Versar will continue to receive wastewater and soil vapor extraction equipment on-site and will set-up and install this equipment.
- d. Versar will complete the Preconstruction Test Drilling activities (i.e., final six borings), including the pump testing of the aquifer and soil gas survey.
- e. Versar will perform an electromagnetic survey to locate the sump beneath the Southern Concrete Pad.
- f. Versar will start to use the T-1 tank to store water that requires processing, eliminating the need for temporary storage (frac tanks).

**(5) Problems & Resolution**

Versar is in the process of revising the construction schedule to reflect the current anticipated schedule for activities, this will be issued under separate cover. No major milestones on the schedule were impacted during the month. Percent Complete for activities are included in item (1) above. However, three items that have impacted on-site activities include:

- a. Testing protocols associated with the equivalency demonstration for field seaming of PVC and XR-5 liners are under development. Versar will prepare, with the concurrence of the Engineer (Radian), non-destructive (i.e., Vacuum Box) and destructive (i.e., sheer and peel (PVC only)) testing protocols and perform hydrostatic testing of each tank with clean water prior to use.
- b. The Preconstruction Drilling Plan was expanded to include; a soil gas survey, six

***Monthly Construction Report Number 2, Page 4***

additional borings, double casing of borings and an aquifer pump test. In addition, the thickness of the Southern Concrete Pad was found to be two to three times thicker than anticipated, the subsurface soils encountered were hard clays (slowing drilling) and removal of standing water on the pad required the use of temporary frac tanks.

- c. Equipment delivery has been delayed due to back-ordering. Versar has assigned an expediter to facilitate delivery.

These three items have caused a delay of three weeks in Versar's construction schedule. Versar believes that two weeks can be recouped by overlapping tasks thereby reducing the scheduled time for sheet piling installation based upon subcontractor input. In any event no Schedule Z milestones are expected to be impacted.

Photographs of site activities taken during the month are included in Attachment 3.

If you have any questions, please feel free to call me at (215) 788-7844, Extension 222.

Sincerely,



G. J. Anastos, Ph.D., P.E.  
Project Manager

attachments

cc:	D Basko (Versar)	M Dowiak (Radian)
	R Ball (ENVIRON)	J Freeman (DOJ)
	J Borucki (Versar)	C Gaffney (Versar)
	N Bernstein (NEB & A)	J Kyle, III (B & T)
	M Colonna (Radian)	G Scarpone (Handex)

**Attachment 1**  
**Analysis of Standing Water from Southern Concrete Pad**  
**(unvalidated)**

ANALYTICAL REPORT

Mr. Chris White  
HARDEX OF INDIANA  
8503 Glenview Rd.  
Indianapolis, IN 46268

12/23/1997  
NET Job Number: 97.07962  
Page 1 of 4

Enclosed are the analytical results for the following samples  
submitted to NET, Inc. Indianapolis Division for analysis:

Project Description: 115062-10 / ENVIROCHEM

Sample Number	Sample Description	Date Taken	Date Received
193094	STORMWATERS SVOC'S	12/11/1997	12/15/1997
193095	STORMWATERS VOC'S	12/18/1997	12/19/1997

National Environmental Testing, Inc. certifies that the analytical  
results contained herein apply only to the specific samples  
analyzed.  
Reproduction of this analytical report is permitted only in its  
entirety.

Project Representative

12/30/97 TUE 08:35 FAX  
US: 21 PM EST 12/23/97 51/ 04Z 4ZMB

Page 3 003

## ANALYTICAL REPORT

Mr. Chris White  
HARDEX OF INDIANA  
8585 Lionville Rd.  
Indianapolis, IN 46260

12/23/1997

Sample No.: 193094  
Job No.: 97.07962  
P.O. No.:

Page 2 of 4

Sample Description: STORMWATERS SVOC'S  
Job Description: 119062-10 / ENVIROCHEM

Date Taken: 12/11/1997

Date Received: 12/15/1997

Parameter	Result	Flag	Units	Analyst/ Date of Analysis	Method Number	Reporting Limit
BNA - 8270 (AQ)						
Benzyl butyl phthalate	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
Bis(2-ethylhexyl)phthalate	<20.		ug/L	aka / 12/23/1997	S-8270	<20.
Di-n-butylphthalate	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
1,2-Dichlorobenzene	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
Diethyl phthalate	19		ug/L	aka / 12/23/1997	S-8270	<10.
Dimethyl phthalate	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
Isophorone	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
Naphthalene	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
SURR: Nitrobenzene-d5	78		95-1148	aka / 12/23/1997	S-8270	
SURR: 2-Fluorobiphenyl	77		40-1108	aka / 12/23/1997	S-8270	
SURR: Terphenyl-d14	55		33-1418	aka / 12/23/1997	S-8270	
Phenol	<10.		ug/L	aka / 12/23/1997	S-8270	<10.
SURR: Phenol-d5	71		10-948	aka / 12/23/1997	S-8270	
SURR: 2-Fluorophenol	50		21-1008	aka / 12/23/1997	S-8270	
SURR: 2,4,6-Trifluorophenol	85		10-1238	aka / 12/23/1997	S-8270	

ANALYTICAL REPORT

MR. CHIT'S WHITE  
 HONOLULU, IN 46268  
 8888 TRANSVILLE RD.  
 INDIANAPOLIS, IN 46268  
 Sample No.: 180094  
 Job No.: 97.07942  
 P.O. NO.: 1

Page 3 of 4

Sample Description: STIMULATORS SVCS  
 Job Description: 116082-10 / ENVIRONMENT  
 Date Taken: 12/11/1997  
 Date Received: 12/15/1997

Parameter	Result	Unit	Limit	Analyst/	Date of Analysis	Method	Reporting	Limit	Complete
BNA extraction, B270 (mg)	Complete				12/18/1997	S-9520	Complete		

12/30/97 TUE 09:38 FAX

Page 2005

## ANALYTICAL REPORT

Mr. Chris White  
 HANDEI OF INDIANA  
 8585 Ilonsville Rd.  
 Indianapolis, IN 46266

12/23/1997

Sample No.: 193095  
 Job No.: 97.07902  
 P.O. NO.:

Page 4 of 4

Sample Description: STORMWATERS VOC'S  
 Job Description: 115082-10 / ENVIRONMENT

Date Taken: 12/15/1997

Date Received: 12/15/1997

Parameter	Result	Flag	Units	Analyst/ Date of Analysis	Method Number	Reporting Limit
VOLATILES-8260 (AQ)						
Acetone	<50		ug/L	bds / 12/18/1997	S-8260	<50
Chloroform	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
1,1-Dichloroethane	32.		ug/L	bds / 12/18/1997	S-8260	<5.0
1,1-Dichloroethene	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
cis-1,2-Dichloroethene	100.		ug/L	bds / 12/18/1997	S-8260	<5.0
trans-1,2-Dichloroethene	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
Ethylbenzene	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
2-Hexanone	<50		ug/L	bds / 12/18/1997	S-8260	<50
Methylene chloride	<10		ug/L	bds / 12/18/1997	S-8260	<10
Methyl-ethyl-ketone (MEK)	<50		ug/L	bds / 12/18/1997	S-8260	<50
4-Methyl-2-pentanone (MIBK)	<50		ug/L	bds / 12/18/1997	S-8260	<50
Tetrachloroethene	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
Toluene	14.		ug/L	bds / 12/18/1997	S-8260	<5.0
1,1,1-Trichloroethane	75.		ug/L	bds / 12/18/1997	S-8260	<5.0
1,1,2-Trichloroethane	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
Trichloroethene	<5.0		ug/L	bds / 12/18/1997	S-8260	<5.0
Vinyl chloride	15.		ug/L	bds / 12/18/1997	S-8260	<2.0
Xylenes, (Total)	13.		ug/L	bds / 12/18/1997	S-8260	<5.0
SURR: Toluene-d8	93.0		86-1104	bds / 12/18/1997	S-8260	
SURR: Dibromofluoromethane	101		86-1184	bds / 12/18/1997	S-8260	
SURR: 4-Bromofluorobenzene	92.5		86-1158	bds / 12/18/1997	S-8260	

Attention: Chris White  
 Handex  
 8583 Zionsville Road  
 Indianapolis IN 46268

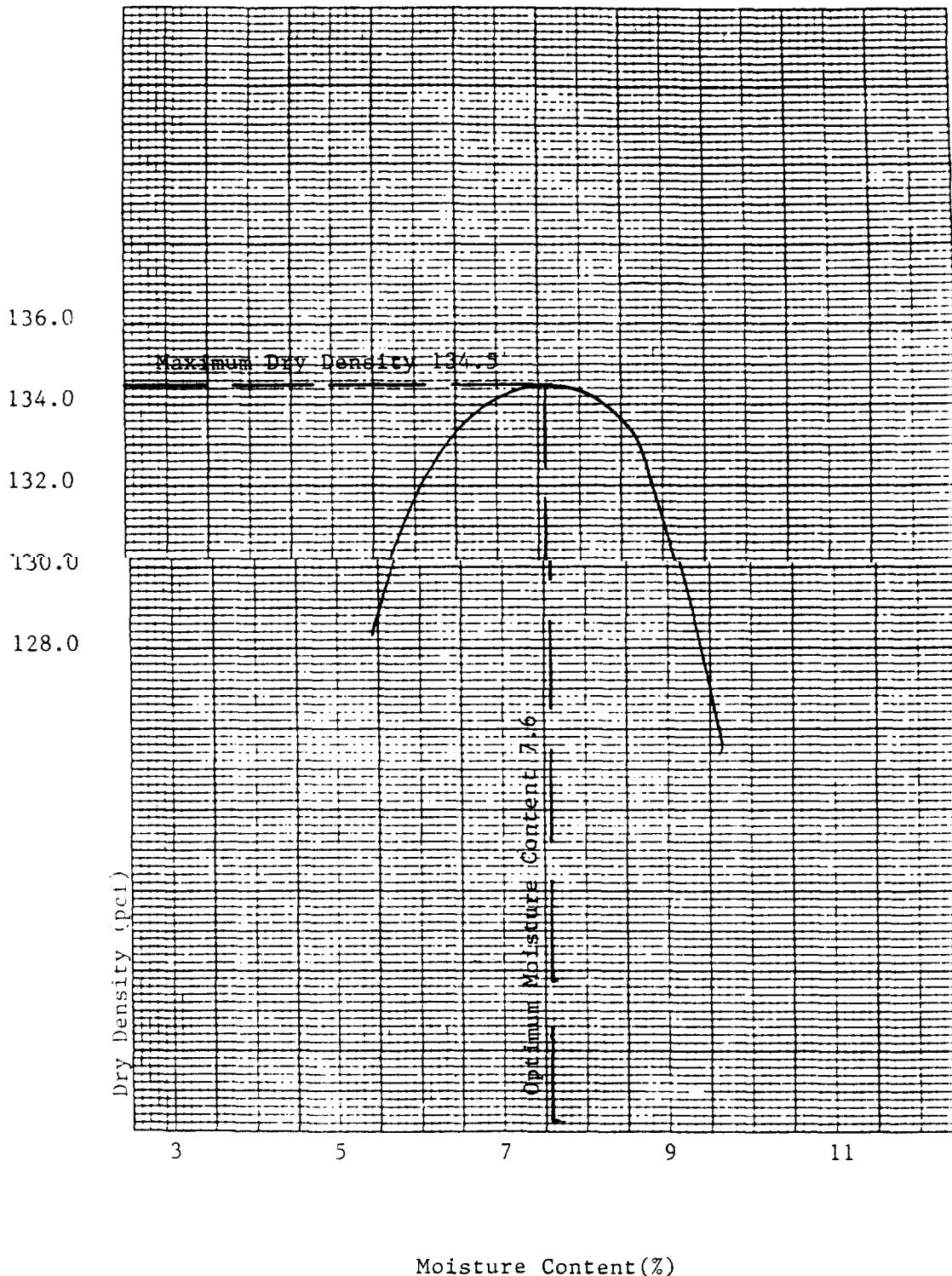
Date of Report: 01/09/98  
 Project Number: 98010084  
 Lab ID: 98-0000309  
 Date Collected: 01/07/98 00:00  
 Collected By: Client  
 Date Received: 01/08/98 09:30  
 C of C Number:  
 Temperature: Received on Ice

Sample Desc: SW VOC's

	Result	Unit	PQL	Procedure	Test Date
<b>ORGANIC</b>					
<b>GCMS VOLATILES</b>					
1,1,1-Trichloroethane	50	ug/L	5	SW 8260m	01/08/98
1,1,2-Trichloroethane	<5	ug/L	5	SW 8260m	01/08/98
1,1-Dichloroethane	19	ug/L	5	SW 8260m	01/08/98
1,1-Dichloroethene	<5	ug/L	5	SW 8260m	01/08/98
1,2-Dichloroethene Total	120	ug/L	5	SW 8260	01/08/98
2 Hexanone	<10	ug/L	10	SW 8260m	01/08/98
Acetone	<10	ug/L	10	SW 8260m	01/08/98
Chloroform	<5	ug/L	5	SW 8260m	01/08/98
Ethylbenzene	<5	ug/L	5	SW 8260m	01/08/98
Methylene Chloride (Dichloromethane)	<5	ug/L	5	SW 8260m	01/08/98
2-Butanone (Methyl Ethyl Ketone)	<10	ug/L	10	SW 8260m	01/08/98
4-Methyl-2-pentanone (MIBK)	<50	ug/L	50	SW 8260m	01/08/98
Xylenes, Total	6	ug/L	5	SW 8260	01/08/98
trans-1,2-Dichloroethene	<5	ug/L	5	SW 8260m	01/08/98
Trichloroethene	<5	ug/L	5	SW 8260m	01/08/98
Tetrachloroethene	<5	ug/L	5	SW 8260m	01/08/98
Toluene	10	ug/L	5	SW 8260m	01/08/98
Vinyl Chloride	<10	ug/L	10	SW 8260m	01/08/98

**Attachment 2**  
**Compaction and Concrete Strength Test Data**

Sample No.: LMG  
 Description of Material: Recycled Crushed Limestone  
 Method of Test: ASTM D-1557 (Modified)  
 Location of Material: On-Site



Prepared For:  
 Versar, Inc.  
 Bristol, PA

PROJECT NAME  
 Enviro Chem Super Fund Site  
 Zionsville, IN



Prepared By:  
 Alt & Witzig Engineering, Inc.  
 Indianapolis, IN

PROJECT NO  
 TP7128-1

DATE  
 12/18/97

cc: Versar, Inc./Mr. Joe Borucki



# Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 12/30/97**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-3**Remarks:** Tuesday, December 30, 1997

Pursuant to your request, our engineering technician has performed an inspection of concrete placement at the above referenced project. The results of the field inspection and corresponding laboratory testing are summarized below:

Location of Placement: South end slab, process building

Date of Pour:	12/30/97	Concrete Supplier:	IMI
Air Temp. (F):	32		
Concrete Temp. (F):	69	Supplier Ticket No.:	K463819
No. of Cylinders:	4	Time Truck Dispatched:	10:51
Slump(in):	7 3/4	Time Truck Unloaded:	11:47
Type of Concrete:	3500 psi	Cubic Yds - Per Truck:	10
Air Content (%):	7.9	Cubic Yds - Cumulative:	20
Admixtures:	Mid Range W/R, Freeze Guard		

**Results:**

COMPRESSION TEST RESULTS  
(Nominal Cylinder Size 6" X 12")

**Reference No.:** 58251**Date Received:** 12/31/97

No.	Cure	Date Tested	Age Days	Strength PSI
8837	L	01/06/98	7	3110
8838	L	01/06/98	7	3220
8839	L	01/27/98	28	3730
8840	L	01/27/98	28	4150

Field Data Submitted By  
X Alt & Witzig Engineering

Cylinders Picked Up By  
X Alt & Witzig Personnel

Field Data Submitted By  
Client's Representative

Specification Requirement at 28 days 3500 psi.

Cylinders Delivered To  
Alt & Witzig Engineering

cc: Versar, Inc. c/o Enviro Chem Super Fund Site/Mr. Joe Borucki



# Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 12/31/97**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-4**Remarks:** Wednesday, December 31, 1997

## FIELD DATA

**Location of Placement:** Curb

Date of Pour:	12/31/97	Concrete Supplier:	*
Air Temp. (F):	*		
Concrete Temp. (F):	*	Supplier Ticket No.:	*
No. of Cylinders:	2	Time Cylinders Made:	*
Slump(in):	*	Time Truck Unloaded:	*
Type of Concrete:	3500 psi	Cubic Yds - Per Truck:	*
		Cubic Yds - Cumulative:	*

\*Information not Available

**Results:**

COMPRESSION TEST RESULTS  
(Nominal Cylinder Size 6" X 12")

**Reference No.:** 58389**Date Received:** 01/07/98

No.	Cure	Date Tested	Age Days	Strength PSI
9384	L	01/14/98	14	4410
9385	L	01/28/98	28	

**Field Data Submitted By**  
Alt & Witzig Engineering**Cylinders Picked Up By**  
X Alt & Witzig Personnel**Field Data Submitted By**  
X Client's Representative**Specification Requirement at 28 days 3500 psi.**      **Cylinders Delivered To**  
Alt & Witzig Engineering**cc:** Versar, Inc. c/o Enviro Chem Super Fund Site/Mr. Joe Borucki

*Subsurface Investigation and Foundation Engineering  
Construction Materials Testing and Inspection  
Environmental Services*



## Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 01/07/98

**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-5

**Remarks:** Wednesday, January 7, 1998

Our senior engineering technician arrived on the above referenced job site to inspect the subgrade for three (3) tanks (T4, T2 and T1) just south of process building.

Proofrolling was observed in these areas and no soft pockets or unstable materials were found.

**Sr. Engineering Technician:** Ezra Roberts

**Principal Engineer:** Mark E. Alt P.E.

cc: Versar, Inc. c/o Enviro Chem Super Fund Site/Mr. Joe Borucki

*Subsurface Investigation and Foundation Engineering  
Construction Materials Testing and Inspection  
Environmental Services*



# Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 01/07/98**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-6

Page 1 of 2

**Remarks:** Wednesday, January 7, 1998

## REPORT OF FIELD COMPACTION TESTS

### TEST DATA: NUCLEAR GAUGE

<u>NO.</u>	<u>DEPTH/ ELEV.</u>	<u>SOIL ID NUMBER</u>	<u>MAXIMUM LAB DRY DENSITY</u>	<u>MOISTURE CONTENT</u>	<u>IN-PLACE DRY DENSITY</u>	<u>PERCENT COMPACTION</u>	<u>COMMENTS</u>
1	0'1"	1MG	134.5	7.6	132.1	98.2	A
2	0'1"	1MG	134.5	7.8	129.0	95.9	A
3	0'1"	1MG	134.5	6.8	130.4	97.0	A
4	0'1"	1MG	134.5	6.9	130.9	97.3	A
5	0'1"	1MG	134.5	8.1	131.3	97.6	A
6	0'1"	1MG	134.5	8.2	129.9	96.6	A

### NO.

### TEST LOCATION

- |   |                |
|---|----------------|
| 1 | T4, north side |
| 2 | T4, east side  |
| 3 | T4, west side  |
| 4 | T4, south side |
| 5 | T2, north side |
| 6 | T2, east side  |

### NOTES:

DENSITIES SHOWN: Lbs. per cubic foot  
MOISTURE CONTENT: Per Cent of dry weight  
PERCENT COMPACTION: Based on maximum  
dry density obtained on sample  
indicated by soil ID number.

- A. TEST RESULTS COMPLY  
WITH SPECIFICATIONS
- B. RECOMPACTION REQUIRED
- C. TEST IS AFTER  
RECOMPACTION

**Sr. Engineering Technician:** Ezra Roberts**Principal Engineer:** Mark E. Alt, P.E.

cc: Versar, Inc./Mr. Joe Borucki



# Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 01/07/98**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-6

Page 2 of 2

**Remarks:** Wednesday, January 7, 1998**REPORT OF FIELD COMPACTION TESTS****TEST DATA: NUCLEAR GAUGE**

<u>NO.</u>	<u>DEPTH/ ELEV.</u>	<u>SOIL ID NUMBER</u>	<u>MAXIMUM LAB DRY DENSITY</u>	<u>MOISTURE CONTENT</u>	<u>IN-PLACE DRY DENSITY</u>	<u>PERCENT COMPACTION</u>	<u>COMMENTS</u>
7	0' 1"	1MG	134.5	8.4	131.9	98.1	A
8	0' 1"	1MG	134.5	8.3	132.1	98.2	A
9	0' 1"	1MG	134.5	7.8	132.8	98.7	A
10	0' 1"	1MG	134.5	7.5	131.9	98.1	A
11	0' 1"	1MG	134.5	7.7	133.6	99.3	A
12	0' 1"	1MG	134.5	7.0	130.1	96.7	A

**NO.****TEST LOCATION**

7 T2, west side  
8 T2, south side  
9 T1, north side  
10 T1, west side  
11 T1, east side  
12 T1, south side

**NOTES:**

DENSITIES SHOWN: Lbs. per cubic foot  
MOISTURE CONTENT: Per Cent of dry weight  
PERCENT COMPACTION: Based on maximum  
dry density obtained on sample  
indicated by soil ID number.

A. TEST RESULTS COMPLY  
WITH SPECIFICATIONS  
B. RECOMPACTION REQUIRED  
C. TEST IS AFTER  
RECOMPACTION

**Sr. Engineering Technician:** Ezra Roberts**Principal Engineer:** Mark E. Alt, P.E.

cc: Versar, Inc./Mr. Joe Borucki

*Subsurface Investigation and Foundation Engineering  
Construction Materials Testing and Inspection  
Environmental Services*



# Alt & Witzig Engineering, Inc.

3405 W. 96th STREET • INDIANAPOLIS, INDIANA 46268  
(317) 875-7040 • FAX (317) 870-0314

**Tested For:**

Versar, Inc.  
Corporate Office  
1900 Frost Road  
Bristol, PA 19007

**Date:** 01/21/98**Project:**

Enviro Chem Super Fund Site  
Job #3709  
Zionsville, Indiana

**Our Report No.:** TP7128-8**Remarks:** Wednesday, January 21, 1998

## REPORT OF FIELD COMPACTION TESTS

### TEST DATA: NUCLEAR GAUGE

<u>NO.</u>	<u>DEPTH/ ELEV.</u>	<u>SOIL ID NUMBER</u>	<u>MAXIMUM LAB DRY DENSITY</u>	<u>MOISTURE CONTENT</u>	<u>IN-PLACE DRY DENSITY</u>	<u>PERCENT COMPACTION</u>	<u>COMMENTS</u>
1	Grade	1MG	134.5	9.6	129.8	96.5	A
2	Grade	1MG	134.5	9.5	133.6	99.3	A
3	Grade	1MG	134.5	9.4	131.4	97.7	A
4	Grade	1MG	134.5	9.5	132.0	98.1	A
5	Grade	1MG	134.5	9.3	129.7	96.4	A

**NO.****TEST LOCATION** Tank #4

- 1 Northernmost point in radius
- 2 Easternmost point in radius
- 3 Southernmost point in radius
- 4 Westernmost point in radius
- 5 Center of tank

**NOTES:**

DENSITIES SHOWN: Lbs. per cubic foot  
MOISTURE CONTENT: Per Cent of dry weight  
PERCENT COMPACTION: Based on maximum  
dry density obtained on sample  
indicated by soil ID number.

- A. TEST RESULTS COMPLY  
WITH SPECIFICATIONS
- B. RECOMPACTION REQUIRED
- C. TEST IS AFTER  
RECOMPACTION

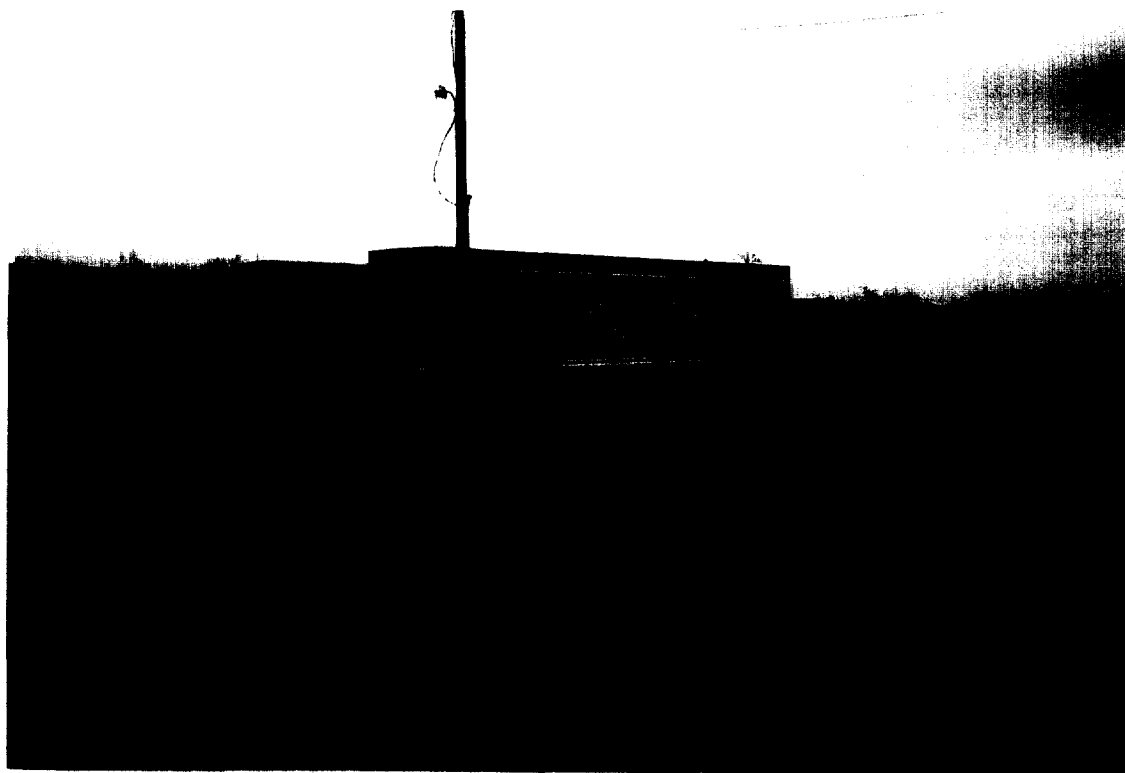
**Sr. Engineering Technician:** Dustin Fairchild**Principal Engineer:** Mark E. Alt, P.E.**cc:** Versar, Inc./Mr. Joe Borucki

## **Attachment 3**

### **Site Photographs**



**Photograph # 1 - View looking northeast showing the Enviro-Chem Site sign at the entrance to the site.**



**Photograph # 2 - View looking northeast showing the construction trailers.**



**Photograph # 3 - View looking southeast showing the Processing Building.**



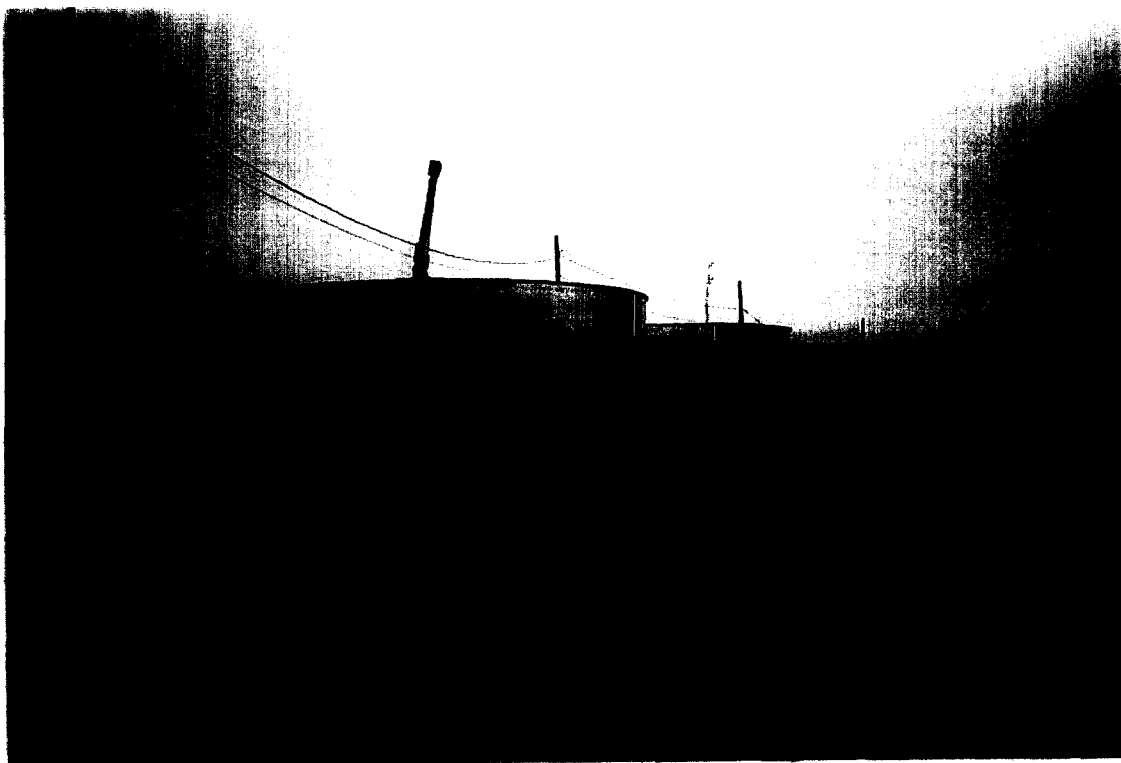
**Photograph # 4 - View looking northeast showing two of the high volume air samplers used for the baseline air monitoring.**



**Photograph # 5 - View looking southeast showing the standing water on the Southern Concrete Pad.**



**Photograph # 6 - View looking southeast of the three frac tank used for storage of the standing water from the Southern Concrete Pad in the fore ground.**



**Photograph # 7 View looking northwest showing three of the four storage tanks under construction. Note Process building in the background.**



**Photograph # 8 - View of the inside of one of the storage tanks in which a PVC liner is being installed.**